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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,253	08/02/2001	James Gabriel Brewington	YOR.281	2541

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MCGINN & GIBB, PLLC
8321 OLD COURTHOUSE ROAD
SUITE 200
VIENNA, VA 22182-3817

EXAMINER

HANNAHER, CONSTANTINE

ART UNIT PAPER NUMBER

2878

DATE MAILED: 05/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .	Applicant(s)	
	09/923,253	BREWINGTON ET AL.	
	Examiner	Art Unit	
	Constantine Hannaher	2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Election/Restrictions

1. The Examiner considers that there are three groups of claims with divergent subject matter but makes no requirement on that basis at this time.

Oath/Declaration

2. When applicant states that the post office address is the "same" as residence applicant's representative should keep in mind that a "residence" is a city and state or foreign country. The superfluous information given for residence is accepted as constituting a mailing address. The Office has been able to discern the city and state or foreign country of residence from the information supplied. See the requirements of 37 CFR 1.63(c)(1) as amended effective November 7, 2000.

Claim Objections

3. Claim 9 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 8 already requires the integration and optical isolation recited.
4. Applicant is advised that should claim 10 be found allowable, claim 11 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).
5. Applicant is advised that should claim 13 be found allowable, claim 12 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight

difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

6. Claim 14 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 8 already requires the module recited.

7. Claim 17 is objected to because of the following informalities: "covers" is improperly pluralized. Appropriate correction is required.

8. Claims 21-25 and 28 are objected to because of the following informalities: claims 21 and 28 refer to "said plurality of digital signals" when the claims each establish at line 2 a plurality of digital *pulses*. Appropriate correction is required.

The balance of the claims is objected to on the basis of their dependence.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1, 7, 15, and 19 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Levine *et al.* (1995).

With respect to independent claim 1, Levine *et al.* discloses a presence detector (Fig. 1) comprising an optical emitter 2 for emitting optical radiation, an optical detector 4 for detecting a presence of an object 3 based on receiving the optical radiation, and a microcontroller 1 for controlling the optical emitter 2 and processing the output of the optical detector 4. There is software in the microcontroller 1. The software provides a range adjustment based on the object 3 (page 421) and the software provides range hysteresis based on the object 3 (page 420). The property (signal 6 being raised) that has been changed by an external agent (presence of object 3) does not return to its original value (signal 6 being lowered) when the cause of the change (object 3) is removed (for some non-zero time interval **T**) so range hysteresis is established.

With respect to dependent claim 7, the optical detector 4 in the presence detector of Levine *et al.* is plainly identified as a “module.”

With respect to independent claim 15, Levine *et al.* discloses a “display” (“computer displays”) terminal (“in congested areas”). The claim is otherwise identical to claim 1 and is rejected on the same basis.

With respect to dependent claim 19, the optical radiation in the display terminal of Levine *et al.* includes infrared radiation.

11. Claims 26 and 27 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Jahrling (US006161814A).

With respect to independent claim 26, Jahrling discloses infrared emitter-detector unit comprising a panel 56 comprising a surface, two apertures 60, 58 therein extending through the surface, and two cavities 70, 68, each cavity extending to one of the two apertures, the two cavities being isolated from radiation communication from each other (column 5, lines 16-21), an infrared emitter 52 disposed within a first one 70 of the two cavities and operable to emit infrared radiation

through a first one **60** of the two apertures, an infrared detector **50** disposed with a second one **68** of the two cavities and operable to receive infrared radiation through a second one **58** of the two apertures, and a pair of infrared-transparent covers **66**, **64** each being disposed over one of the two apertures, the covers being separated to prevent transmission of infrared radiation therebetween (column 5, lines 7-11).

With respect to dependent claim 27, the unit of Jahrling comprises a unit sealed by cover **46**.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claims 2, 4, 5, 3, 6, 8, 9, 11, 12, 10, 13, 14, 16, 17, 20, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levine *et al.* (1995) and Jahrling (US006161814A).

With respect to dependent claim 2, the presence detector of Levine *et al.* is illustrated schematically (Fig. 1). Accordingly, the choice of mounting the elements **2**, **4**, and **1** is within the

ordinary skill in the art. In view of the identification of a “display” (“computer displays”) terminal (“in congested areas”) the choice of integration in a cover thereof would have been obvious in view of the desire for ruggedness and unobtrusiveness and the like. Jahrling discloses that integration of a presence detector into a cover **56** (Figs. **5** and **6**) is known, and further shows optical isolation between the optical emitter **52** and optical detector **50** (Fig. **4**) being provided by the cover **56** and barrier **72** (column 5, lines 7-14). In view of the improved performance suggested by Jahrling, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the presence detector of Levine *et al.* to integrate the elements into a cover with optical isolation.

With respect to dependent claim 4, Jahrling further shows first and second optical windows **66**, **64** for the optical emitter and optical detector, respectively, to eliminate optical coupling between the emitter and the detector (column 5, lines 14-19). In view of the improved performance suggested by Jahrling, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the presence detector of Levine *et al.* to comprise separate windows for the optical elements.

With respect to dependent claim 5, the optical radiation in the presence detector of Levine *et al.* includes infrared radiation.

With respect to dependent claim 3, the presence detector of Levine *et al.* is illustrated schematically (Fig. **1**). Jahrling shows first and second optical windows **66**, **64** for the optical emitter and optical detector, respectively, to eliminate optical coupling between the emitter and the detector (column 5, lines 14-19). In view of the improved performance suggested by Jahrling, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the presence detector of Levine *et al.* to comprise separate windows for the optical elements.

With respect to dependent claim 6, the optical radiation in the presence detector of Levine *et al.* includes infrared radiation.

With respect to independent claim 8, Levine *et al.* discloses a presence detector (Fig. 1) comprising an optical emitter 2 for emitting optical radiation, an optical detector 4 for detecting a presence of an object 3 based on receiving the optical radiation, and a microcontroller 1 for controlling the optical emitter 2 and processing the output of the optical detector 4. The optical detector 4 in the presence detector of Levine *et al.* is plainly identified as a “module.” There is software in the microcontroller 1. The software provides a range adjustment based on the object 3 (page 421) and the software provides range hysteresis based on the object 3 (page 420). The property (signal 6 being raised) that has been changed by an external agent (presence of object 3) does not return to its original value (signal 6 being lowered) when the cause of the change (object 3) is removed (for some non-zero time interval **T**) so range hysteresis is established. The presence detector of Levine *et al.* is illustrated schematically (Fig. 1). Accordingly, the choice of mounting the elements 2, 4, and 1 is within the ordinary skill in the art. In view of the identification of a “display” (“computer displays”) terminal (“in congested areas”) the choice of integration in a cover thereof would have been obvious in view of the desire for ruggedness and unobtrusiveness and the like. Jahrling discloses that integration of a presence detector into a cover 56 (Figs. 5 and 6) is known, and further shows optical isolation between the optical emitter 52 and optical detector 50 (Fig. 4) being provided by the cover 56 and barrier 72 (column 5, lines 7-14). In view of the improved performance suggested by Jahrling, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the presence detector of Levine *et al.* to integrate the elements into a cover with optical isolation.

With respect to dependent claim 9, see the explanation regarding claim 8.

With respect to dependent claim 11, Jahrling further shows first and second optical windows 66, 64 for the optical emitter and optical detector, respectively, to eliminate optical coupling between the emitter and the detector (column 5, lines 14-19). In view of the improved performance suggested by Jahrling, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the presence detector of Levine *et al.* to comprise separate windows for the optical elements.

With respect to dependent claim 12, the optical radiation in the presence detector of Levine *et al.* includes infrared radiation.

With respect to dependent claim 10, Jahrling further shows first and second optical windows 66, 64 for the optical emitter and optical detector, respectively, to eliminate optical coupling between the emitter and the detector (column 5, lines 14-19). In view of the improved performance suggested by Jahrling, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the presence detector of Levine *et al.* to comprise separate windows for the optical elements.

With respect to dependent claim 13, the optical radiation in the presence detector of Levine *et al.* includes infrared radiation.

With respect to dependent claim 14, see the explanation regarding claim 8.

With respect to dependent claim 16, the display terminal of Levine *et al.* is illustrated schematically (Fig. 1). Accordingly, the choice of mounting the elements 2, 4, and 1 is within the ordinary skill in the art. The choice of integration in a cover of the display terminal would have been obvious in view of the desire for ruggedness and unobtrusiveness and the like. Jahrling discloses that integration of a presence detector into a cover 56 (Figs. 5 and 6) is known. In view of the smooth appearance of the cover suggested by Jahrling, it would have been obvious to one of ordinary skill in

the art at the time the invention is made to modify the display terminal of Levine *et al.* to integrate the elements into a cover.

With respect to dependent claim 17, Jahrling further shows optical isolation between the optical emitter **52** and optical detector **50** (Fig. **4**) being provided by the cover **56** and barrier **72** (column 5, lines 7-14). In view of the improved performance suggested by Jahrling, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the display terminal of Levine *et al.* to integrate the elements into a cover with optical isolation.

With respect to dependent claim 20, the optical radiation in the display terminal of Levine *et al.* includes infrared radiation.

With respect to dependent claim 18, Jahrling further shows first and second optical windows **66**, **64** for the optical emitter and optical detector, respectively, to eliminate optical coupling between the emitter and the detector (column 5, lines 14-19). In view of the improved performance suggested by Jahrling, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the display terminal of Levine *et al.* to comprise separate windows for the optical elements.

15. Claim 21-25 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levine *et al.* (1995) and Van Marcke (US006215116B1).

With respect to independent claim 21, Levine *et al.* discloses a chatter-free (reduced probability of false triggering by noise, page 420) infrared emitter-detector (Fig. **1**) comprising an infrared emitter **2** operable to emit a plurality of digital pulses on infrared radiation (Fig. **2(a)**) directed at an operator **3**, an infrared detector **4** operable to sense the infrared radiation after reflection (Fig. **1**) from the operator **3**, and a controller **1** operable to cause the infrared detector to emit a first signal **6** upon sensing of a first fraction of the plurality of digital signals ("If more than

half of the N groups are detected..."). The controller 1 in the infrared emitter-detector of Levine *et al.* is operable to emit a second signal 6 upon *not* sensing a second fraction of the plurality of digital signals, notwithstanding that anything is larger than nothing. However, Van Marcke shows a decision block 316 (Fig. 6) in an infrared emitter 1-infrared receiver 3 operable to emit first and second signals upon sensing the appropriate fractions of emitted digital pulses reflected by an operator (see claim 9). In view of the effective performance in determining whether or not an object is in the target area, it would have been obvious to one of ordinary skill in the art to modify the infrared emitter-detector of Levine *et al.* to adjust the controller 1 to emit the second signal 6 upon sensing a second fraction of reflected digital pulses which is smaller than the first fraction.

With respect to dependent claim 22, Levine *et al.* places no limitation on the applicability of the disclosed infrared emitter-detector. A point of sale operator (cashier) is a routine example of an operator 3 at equipment similar to a computer display (display and keyboard) in congested areas (checkout lanes) with nearby people (customers). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the operator 3 in the infrared emitter-detector of Levine *et al.* was a point-of-sale operator.

With respect to dependent claim 23, the first signal 6 in the infrared emitter-detector of Levine *et al.* comprises a signal representing detection of the presence of the operator 3 (page 420).

With respect to dependent claim 24, the first signal 6 in the infrared emitter-detector of Levine *et al.* comprises a signal representing detection of the presence of the operator 3 (page 420).

With respect to dependent claim 25, the second signal 6 in the infrared emitter-detector of Levine *et al.* comprises a signal representing detection of the absence of the operator 3 (page 420).

With respect to independent claim 28, Levine *et al.* suggests a method of sensing a presence of an object 3 corresponding to the illustrated infrared emitter-detector (Fig. 1) which would

comprise the steps of emitting a plurality of digital pulses on infrared radiation (Fig. 2(a)) directed at an operator 3, sensing the infrared radiation after reflection (Fig. 1) from the operator 3, causing a first signal 6 to be emitted upon sensing of a first fraction of the plurality of digital signals ("If more than half of the N groups are detected..."). The controller 1 in the infrared emitter-detector of Levine *et al.* also emits a second signal 6 upon *not* sensing a second fraction of the plurality of digital signals, notwithstanding that anything is larger than nothing. However, Van Marcke shows a decision block 316 (Fig. 6) in a method of sensing the presence of an object which is operable to emit first and second signals upon sensing the appropriate fractions of emitted digital pulses reflected by an operator (see claim 9). In view of the effective performance in determining whether or not an object is in the target area, it would have been obvious to one of ordinary skill in the art to modify the method suggested by Levine *et al.* to adjust the controller 1 to emit the second signal 6 upon sensing a second fraction of reflected digital pulses which is smaller than the first fraction.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Constantine Hannaher whose telephone number is (703) 308-4850. The examiner can normally be reached on Monday-Friday with flexible hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (703) 308-4852. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

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May 1, 2003


Constantine Hannaher
Primary Examiner